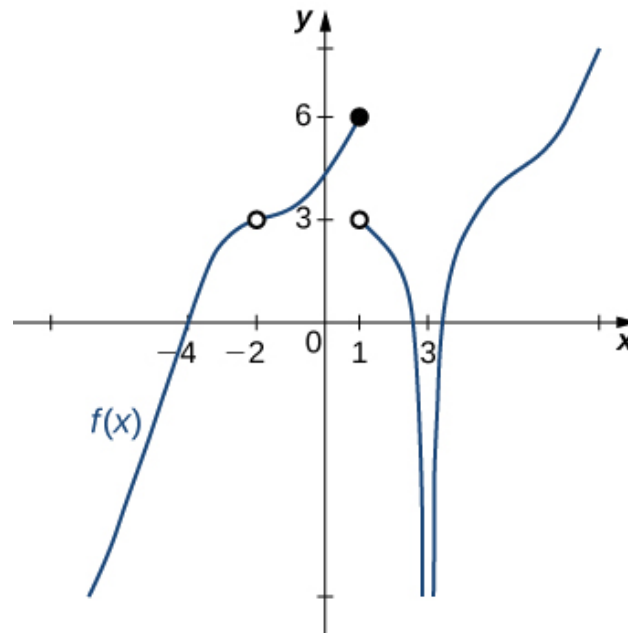


1. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



- A. 1
- B. -2
- C. 3
- D. Multiple a make the statement true.
- E. No a make the statement true.

2. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 2^-} \frac{8}{(x+2)^3} + 7$$

- A. ∞
- B. $f(2)$
- C. $-\infty$
- D. The limit does not exist
- E. None of the above

3. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 5} \frac{\sqrt{9x - 9} - 6}{3x - 15}$$

- A. ∞
 - B. 0.028
 - C. 0.083
 - D. 1.000
 - E. None of the above
-

4. Evaluate the limit below, if possible.

$$\lim_{x \rightarrow 9} \frac{\sqrt{5x - 20} - 5}{9x - 81}$$

- A. 0.100
 - B. ∞
 - C. 0.248
 - D. 0.056
 - E. None of the above
-

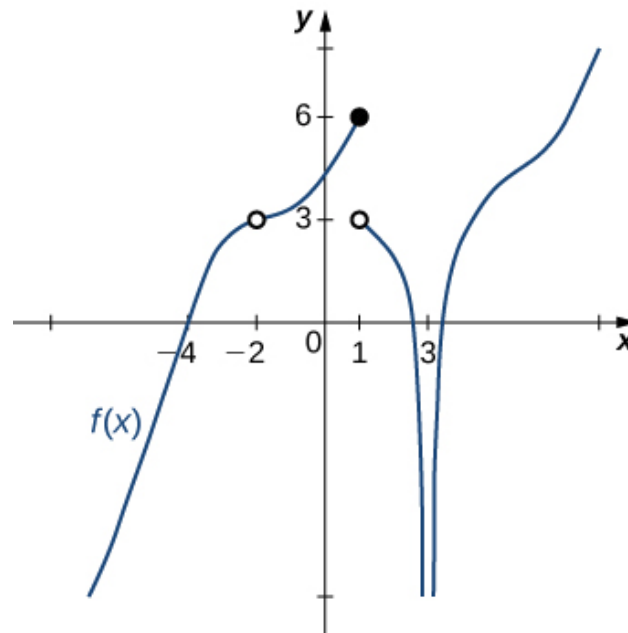
5. Based on the information below, which of the following statements is always true?

As x approaches 7, $f(x)$ approaches 5.372.

- A. $f(7)$ is close to or exactly 5
- B. $f(5) = 7$
- C. $f(5)$ is close to or exactly 7
- D. $f(7) = 5$

E. None of the above are always true.

6. For the graph below, find the value(s) a that makes the statement true:
 $\lim_{x \rightarrow a} f(x)$ does not exist.



- A. 1
 B. 3
 C. -2
 D. Multiple a make the statement true.
 E. No a make the statement true.

7. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \rightarrow 8^+} \frac{-5}{(x+8)^5} + 7$$

- A. $-\infty$
 B. ∞
 C. $f(8)$

- D. The limit does not exist
- E. None of the above

8. Based on the information below, which of the following statements is always true?

$f(x)$ approaches 5.4 as x approaches 2.

- A. $f(2)$ is close to or exactly 5
- B. $f(5) = 2$
- C. $f(5)$ is close to or exactly 2
- D. $f(2) = 5$
- E. None of the above are always true.

9. To estimate the one-sided limit of the function below as x approaches 7 from the right, which of the following sets of numbers should you use?

$$\frac{\frac{7}{x} - 1}{x - 7}$$

- A. {7.1000, 7.0100, 7.0010, 7.0001}
- B. {7.0000, 6.9000, 6.9900, 6.9990}
- C. {6.9000, 6.9900, 7.0100, 7.1000}
- D. {6.9000, 6.9900, 6.9990, 6.9999}
- E. {7.0000, 7.1000, 7.0100, 7.0010}

10. To estimate the one-sided limit of the function below as x approaches 9 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{9}{x} - 1}{x - 9}$$

- A. {9.0000, 9.1000, 9.0100, 9.0010}

- B. $\{9.0000, 8.9000, 8.9900, 8.9990\}$
 - C. $\{8.9000, 8.9900, 8.9990, 8.9999\}$
 - D. $\{9.1000, 9.0100, 9.0010, 9.0001\}$
 - E. $\{8.9000, 8.9900, 9.0100, 9.1000\}$
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